	der ID 12. st 18, 2014 2:3			*123	3794*							Page 1	
Item ID: Revision ID:	D3622-1		,	Accept	*N900	0040	100)*	Setup	Start Stop		S1*	
Item Name: Start Date: Required Date Reference:	Ball Stud 8/18/14 e: 8/18/14	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item :	ID:				Stop	*N:	S2*	
Approvals:		n: <u>MC5</u>	Date: 14-08-20 Date:	Tooling: _ SPC (Y/N):		ate:		.]	Run	Start Stop	^IVI	R1* R2*	
Sequence ID/ Work Center		Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	
Draw Nbr	Revi	ision Nbr											
D3622	Rev	С											
100 *1 00* Hardinge		Hardinge CNC LATHE	SMALL	0.00				90		Ф		JK 2014-08	8-25
Hardinge CNC Lat	the Small	FOLIO REV DWG REV:		G D3622 ,									
110		QC2- Inspect parts off m	achine FAI/FAIB	0.00									
110 QC Quality Control		Memo		0.00				<u></u> ₩0_	(P		DH 2014-08	'-छ
120 *120*		QC8- Inspect parts - seco	and check	0.00				70	Ć	7)		DAS 40 9-89	
QC Quality Control		Memo		0.00	.				- - Y	<u> </u>		14/02/28	

DQA:	T,	. Date:											***	TRAC
QA Closed:		Date:			WORK ORDER NON-	-CC	ONFO	RMANCE / UP		Vork	Ordorun	date only	\neg	AEROSPACE
ZA Closed.		Date.				_			V	VUIK	Order up	date only		····
Work Orde	er:				DISPOSITION				AGAINST D	EPA	RTMENT/	PROCESS		
					Rework			Skid-tube	Crosstube			Water Jet		Engineering
Part N	lo.				Scrap		Ť	Machining	Small Fab		Proc	d. Eng. Coor.		Quality
					Use-as-is		Thern	noforming	Finishing		Rec/Stor	e/Packaging		Other
NCR N	lo				Suspected Unapproved			Large Fab	Composite			Supplier		
Root				Desci	ription of work order update	1	Initial Action			<u> </u>	Sign &		Т	
Cause	Date	Step	Qty	50501	or non-conformance		ief Eng	Descrip			Date	Verification		QC Inspector
Design			1			-		2 330		1			+	
Doc/Data														
quip/Tooling														
landling/Pre														
Material														
Operator														i
Offset/Setup														
Process														
Supplier														
raining														
ransport														
Jnapproved		<u> </u>	<u> </u>	<u> </u>										
						FAI	ULT CAT	regory						
Landir r	ng Gear			r	General		1		_	_		,		
, }	Bending			<u> </u>	Bend		4	rogram	_	-	utside Dime	 -	-	essure/Forced
	Centre No	ot Conce	ntric	<u> </u>	BOM/Route		Grain		<u> </u>	_	ver/Under	-		et-up
	Cracks				Broken/Damage/Defect		Hardwa				rt Incorrec			emperature/Cure
}	Crimp/Kir	nk/Ripple	e/Wave	<u> </u>	Burrs		1 '	on Incomplete/Unc	` -	— (rt Lost/Mis	_		/eld
	Cuffs			-	Contamination	<u> </u>	4	ions Incomplete/Ur	nclear	_	art Moved	_	Jw	rong Stock Pulled
,	Crushing			<u> </u>	Countersink	<u> </u>	1 -	ned/off center	-		ositioned W		٦	
	Heat Trea		T l	-	Cut Too Short	_	Mislabe		L		ower Loss/S	Surge [10	ther
	Inspectio		lupe	-	Drawing Drill Holos		Misread			_				
	Marks/Ch				Drill Holes		Off-set					· · · · · · · · · · · · · · · · · · ·		
}	Turning S			<u> </u>	Finish	_	┪	Calibration						i
	Wave/Tw	rist in Tub	oe .	1	Fit/Function	1	Out of S	Sequence						

Work Ord Monday, Augus				*129	3724*						Page 2
Item ID: Revision ID: Item Name:	D3622-1 Ball Stud			Accept	*N900	040	100)* 5	Setup Sta	171	S1* S2*
Start Date: Required Date Reference:	8/18/14 : 8/18/14	Start Qty: 20.00 Req'd Qty: 20.00	-	Ω* Ω*	Cust Item ? Customer:						
Approvals:	Process QC:	Plan:	Date:	Tooling: SPC (Y/N):		ate:		F	Run Star Sto	/IV	R1* R2*
Sequence ID/ Work Center I 130 *120* Packaging Packaging	D	Operation Description Identify as per dwg & Sto	ck Location: <u>5</u>	Set Up/ Run Hours 7052 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty DAS 28 9-89	Reject Number	Insp. Stamp 2–9–2014

140

QC21- Final Inspection - Work Order Release

0.00

140

Quality Control

Memo

0.00

.4

MUJ 14-09-02 MUJ 14-08-29

DQA:		_ Date:										**	TRAC
QA Closed:		Date:			WORK ORDER NON	-C(ONFO	RMANCE / I		ork Order up	odate only	\neg	AEROSPACE
Work Orde	r:			·	DISPOSITION				AGAINST D	EPARTMENT,	/PROCESS		
Part N NCR N	0				Rework Scrap Use-as-is Suspected Unapproved		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-	Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root				Desci	ription of work order update		nitial	А	ction	Sign &			
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Des	scription	Date	Verification	n	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved						FAI	ULT CA1	FEGORY					
Landin	g Gear				General			**					
	Cracks Crimp/K Cuffs Crushing Heat Tre Inspecti	Not Concer link/Ripple B eat on Strip in	e/Wave Tube		Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish		Grain Hardwa Inspecti Instruct Misalig Mislabe Misread Off-set	on Incomplete/ ions Incomplete ned/off center	e/Unclear	Outside Dim Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	tolerance ct ssing Vrong	S- T- W W W	ressure/Forced et-up emperature/Cure Veld Vrong Stock Pulled Other
		wist in Tul			Fit/Function		ł	Coguenco					

Monday, August 18, 2014 2:38:02 PM

Work Order ID: 123724

123724

Parent Item:

D3622-1

D3622-1

Parent Item Name: Ball Stud

Start Date: 8/18/14

Required Date: 8/18/14

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP Rev:A New Issue 07-04-24 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303H0.500		Purchased	No		100	f	26.5660	0.108	3			
1/1202110	EOO							44				

WK303HO 500^

303 HEX BAR .500

Location	Loc Oty	Loc Code
MAT018	26.566	
m127464	2.73	
<u>m12849</u> 6	3.575	
m128882	20.261	

The 204-08-25

DQA:		. Date:										
					WORK ORDER NON	-CC	ONFO	RMANCE / UF			_	AEROSPACE
QA Closed:		Date:							V	Vork Order u	pdate only	
Work Orde	er:				DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	·
					Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part N	lo.				Scrap			Machining	Small Fab	Pro	od. Eng. Coor.	Quality
	, , , , , , , , , , , , , , , , , , , ,	·			Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	lo				Suspected Unapproved			Large Fab	Composite		Supplier	_
Root				Desci	ription of work order update	1	nitial	Acti	ion	Sign &		
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
Design												
Doc/Data												
quip/Tooling												
Handling/Pre				:								
Material	_	-										
Operator												
Offset/Setup	_											
rocess											-	
Supplier												
raining												
Transport Jnapproved												
Shapproved		L	<u> </u>	<u>L.</u>		EAI	UT CAT	L TEGORY			<u> </u>	
Landir	ng Gear				General		OLI CA	ILGORI				
	Bending				Bend		Folio/P	Program	Γ	Outside Din	nensions [Pressure/Forced
	Centre No	ot Conce	ntric		BOM/Route	\vdash	Grain	. 08. 4	<u> </u>	Over/Under	_	Set-up
•	Cracks				Broken/Damage/Defect		Hardwa	ire		Part Incorre	_	Temperature/Cure
	Crimp/Kir	nk/Ripple	/Wave		Burrs		1	ion Incomplete/Un	gualified	Part Lost/M	<u> </u>	Weld
	Cuffs				Contamination		1	ions Incomplete/U	· -	Part Moved	· -	Wrong Stock Pulled
ļ	Crushing				Countersink	-	ı	ned/off center	<u> </u>	Positioned \	_	
Ì	Heat Trea	it			Cut Too Short		Mislabe			Power Loss,		Other
	Inspection	n Strip in	Tube		Drawing		Misread	d	_		_	
[Marks/Ch	atter			Drill Holes		Off-set					
	Turning S	equence			Finish		Out of 0	Calibration				
	Wave/Tw	ist in Tub	oe		Fit/Function		Out of S	Sequence				

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

DART AEROSPACE LTD	Work Order: 123724	
Description: Ball Stud	Part Number: D3622-1	
Inspection Dwg: D3622 Rev: C	Page 1 of 1	-

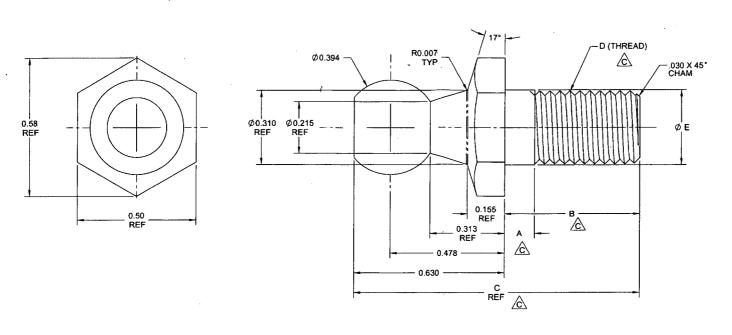
FIRST ARTICLE INSPECTION CHECKLIST

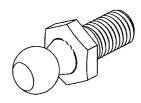
X First Article	Prototype
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		· · · · · · · · · · · · · · · · · · ·	1		1	
Drawing Dimension_	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.58	+/-0.030	0.5615	V			
0.50	+/-0.030	0.496	V			
Ø0.394	+/-0.010	0.3956				
Ø0.310	+/-0.010	0310	~			
Ø0.215	+/-0.010	0.333	J			
0.155	+/-0.010	0.155	J			
0.313	+/-0.010	0313				
0.478	+/-0.010	0.478	√			
0.630	+/-0.010	0.630	J			
0.125	+/-0.010	0.128	✓ ·			·
0.563	+/-0.010	0.565	V			•
1.19	+/-0.030	1:19)	V			٠
0.3125-24UNF-3A	+0.000/-0.072		/			
M.O.W.	Min = 0.3336 Max = 0.3363	0.3355	V ,			
Thread o	min 0.3058 max 0.3125 min 0.2837	0.308	\checkmark			
pitch d	MIN 0.2834	0.284	V			
•						
280000000000000000000000000000000000000						

Measured by: JFC	Audited by:	40 9-89	Preliminary Approval:	•
Date: 2014-08-25	Date:	14/08/28	Date:	

Rev	Date	Change	Revised by	Approved
Α	08.04.15	New Issue	KJ/DD	
В	10.02.02	Dwg Rev updated	KJ 10	
င	11.02.18	Dimensions updated per Dwg Rev C	KJ 9K/	14





D3622-1 BALL STUD SHOWN



D3622-11 BALL STUD SHOWN

PART	DIM	DIM	DIM	WEIGHT	THREAD	Ø	ØE	
NUMBER	Α	В	С	(LBS)	D	MIN	MAX	
D3622-1	0.125	0.563	1.19	0.03	0.3125-24UNF-3A	0.3053	0.3125	
D3622-3	0.125	0.563	1.19	0.03	0.1875-32UNF-3A	0.1840	0.1900	
D3622-5	0.090	0.900	1.53	0.04	0.3125-24UNF-3A	0.3053	0.3125	
D3622-7	0.060	0.330	0.96	0.03	0.3125-24UNF-3A	0.3053	0.3125	
D3622-9	0.090	1.160	1.79	0.04	0.3125-24UNF-3A	0.3053	0.3125	
D3622-11	0.060	N/A	0.69	0.02	NOT THREADED	0.270	0.300	
D3622-13	0.090	0.680	1.31	0.03	0.3125-24UNF-3A	0.3053	0.3125	

D3622-X BALL STUD

SHOP COPY RETURN TO ENGINEERING **UNCONTROLLED COPY** SUBJECT TO AMENDMENT WITHOUT NOTICE

WORK ORDER NO 123724

С	SHEET	JPH	Г			
В	ADD -3	HS				
Α	NEW IS	МВ				
REV.		BY	Г			
DESIGN		JPH		DART AEROSP	ACELT	
DRAWN		JP	H	HAWKESBURY, ONTARIO, CANAD		
CHECKED				DRAWING NO.		
MFG. APPR.			75/	D3622		SH
APPROVED		7/1/	Pl	TITLE		_

BALL STUD DE APPR. DATE 10.07.20

NOTES: 1) MATERIAL: AISI 303 HEX BAR REF DART SPEC M303H0.500

REF DART SPEC M303H0.500

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENT P/N D3622-X & B/N PER QSI 044
7) WEIGHT: SEE D3622-X TABLE

7

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6

3

10.07.20

09.09.18 07.04.13

DATE

REV. C

HEET 1 OF SCALE

NTS

С